

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CARR POND	Lake Area (ha): 4.45
Town: HOPKINTON	Maximum depth (m): 2.7
County: Merrimack	Mean depth (m): 1.3
River Basin: Merrimack	Volume (m <sup>3</sup> ): 59250
Latitude: 43°11'39" N	Relative depth: 1.1
Longitude: 71°45'50" W	Shore configuration: 1.08
Elevation (ft): 495	Areal water load (m/yr): 3.56
Shore length (m): 810	Flushing rate (yr <sup>-1</sup> ): 2.70
Watershed area (ha): 34.9	P retention coeff.: 0.72
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

		8 February 2000	24 June 1999
DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	ALGAE VERY SPARSE
	#2	ANALYZED	(NO DOMINANT)
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			9.37
DOM. ZOOPLANKTON (% TOTAL)	#1		NAUPLIUS LARVA 78%
	#2		
	#3		
ROTIFERS/LITER			16
MICROCRUSTACEA/LITER			99
ZOOPLANKTON ABUNDANCE (#/L)			116
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			1.9
BOTTOM DISSOLVED OXYGEN (mg/L)		9.7	3.2
BACTERIA (E. coli, #/100 ml)	#1		3
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : None

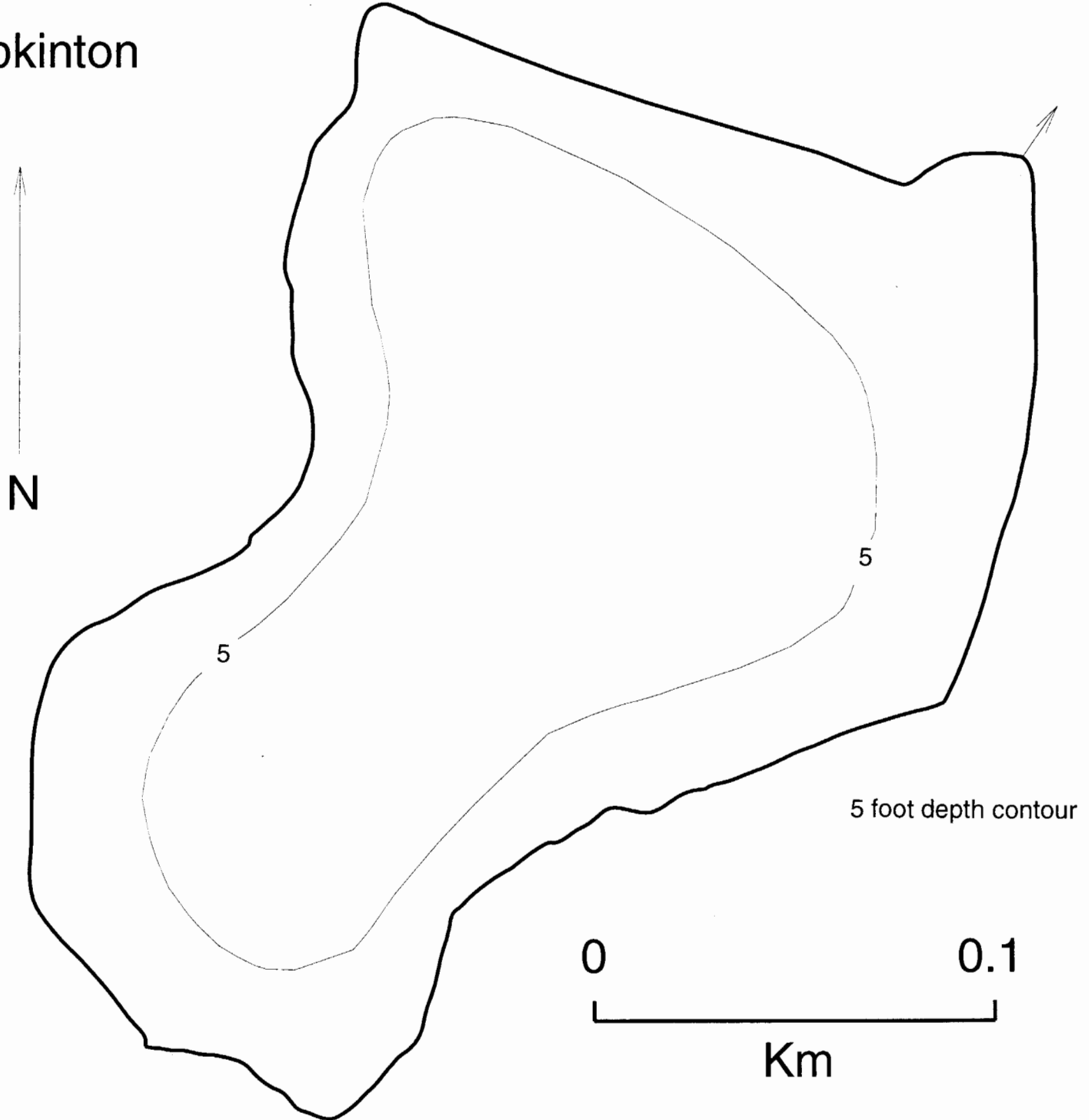
<b>CHEMICAL:</b>		Lake: CARR POND Town: HOPKINTON			
	8 February 2000	24 June 1999			
DEPTH (m)	1.0	2.0	1.0		2.0
pH (units)	5.1	5.1	5.4		5.4
A.N.C. (Alkalinity)	0.7	0.5	0.4		0.4
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN			0.40		0.90
TOTAL PHOSPHORUS	0.013	0.033	0.015		0.013
CONDUCTIVITY ( $\mu$ mhos/cm)	120.1	122.6	106.9		105.4
APPARENT COLOR (cpu)	50	55	34		39
MAGNESIUM			1.18		
CALCIUM			3.2		
SODIUM			14.0		
POTASSIUM			0.55		
CHLORIDE	31	32	27		27
SULFATE	6	5	4		4
TN : TP			27		69
CALCITE SATURATION INDEX			5.8		
All results in mg/L unless indicated otherwise					
<b>TROPHIC CLASSIFICATION: 1999</b>					
	D.O.	S.D.	PLANT	CHL	TOTAL
	**	4	5	2	11
					Eutro.
<b>COMMENTS:</b> <ol style="list-style-type: none"> <li>1. This is a shallow, weedy, light tea-colored, acidic pond. It was eutrophic with relatively high conductivity, sodium and chloride levels, suggestive of road salt runoff.</li> <li>2. Shoreline was all privately owned.</li> <li>3. No inlets; pond is spring fed. This may be the reason for the 5° C temperature difference between top and bottom despite the shallow depth (2 meters).</li> </ol>					

# Carr Pond

Hopkinton

99-III

N



5 foot depth contour

0

0.1

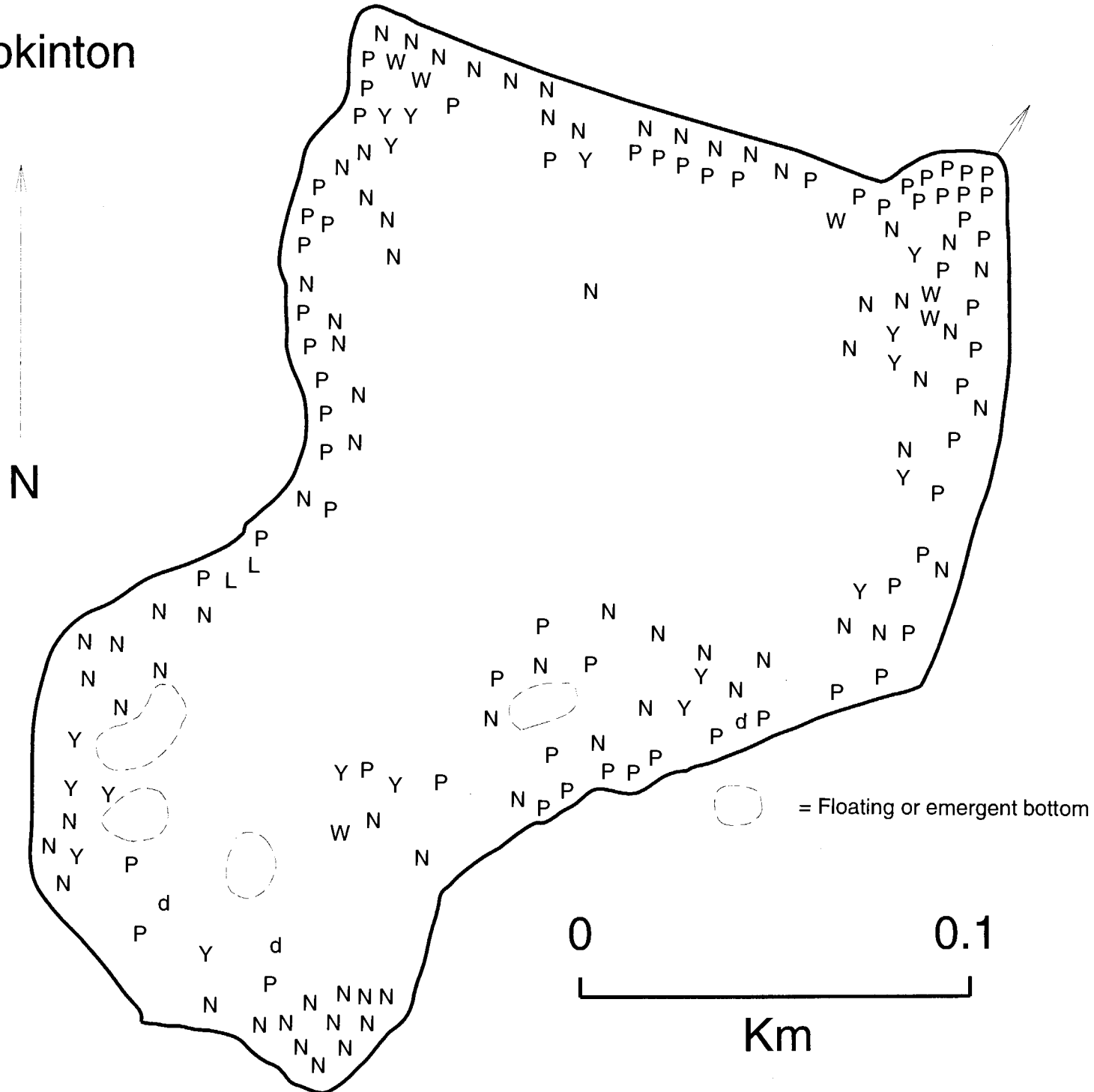
Km

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# Carr Pond

Hopkinton

89-III



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